Remarks

The Examiner objected to the drawings. Three replacement sheets including figures 1-3, now with numeric references to the "sub reflector (24)", are attached. No new matter has been added.

The Examiner objected to the Specification. As suggested by the Examiner, two instances of "and or" have been replaced with "and/or". No new matter has been added.

In each of the statutory rejections, described in detail herein below, applicant respectfully submits that the Examiner repeatedly refers only to "teaches in figures 1-9" to support his rejections, ignoring the plain language of the detailed description of the cited reference, *Knop*, as well as the unambiguous content of the referenced figures, themselves. For example, clear delineations between components and the cross hatching applied to the section vies of the hub, waveguide, dielectric cone and sub reflector in figures 2 and 3 unambiguously shows that these are each separate components and that the dielectric cone is formed from a "synthetic resin or plastic" while the other referenced components are solid metal (see MPEP 608.02 IX. "Drawing Symbols).

The Examiner rejected claims 1-4, 9-12, 15-17, 20, 22 and 25-28 under 35 U.S.C. 102(e) as anticipated by *Knop*. The Examiner suggests that the *Knop* teaches a reflector antenna having a "feed assembly (13a) having a hub (20) from which a waveguide (13) extends; a distal end of the waveguide flaring into a dielectric cone (12)...". Applicant respectfully submits that the distal end of the waveguide of the cited reference does not, in fact, flare into a dielectric cone.

As described in detail in *Knop*, as well as in applicants discussion of *Knop* in paragraph 0011 of the background section of the specification as filed/published, the *Knop* reflector antenna is comprised of a metal waveguide to which the dielectric cone (12) is threadably attached (column 3, lines 48-51). Because the waveguide (13) and dielectric cone (12) of *Knop* are separate components, the waveguide (13) cannot be characterized as having a distal end which flares into a dielectric cone according to the present invention. As each and every element of the invention fails to appear in the cited reference, rejection of independent claims 1, 9, 15 and 20 and dependent claims thereof under 35 U.S.C 102(e) is improper.

Further, with respect to claims 2, 10, 16 and 25, *Knop* unambiguously declares that each of the hub, waveguide, dielectric cone and sub reflector are each separate components joined together

at their respective positions by matching threads formed in each component and environmentally sealed by an o-ring proximate each of the threads. (columns 3-4, lines 48-5). No mention of ultrasonic welding, which is impossible between a metal and a dielectric material, appears in the cited reference – whatsoever. As each and every element of the invention fails to appear in the cited reference, rejection of claims 2, 10, 16 and 25 under 35 U.S.C 102(e) is improper.

Similarly, further with respect to claims 3, 4, 11, 12, 15, 17, 20 and 26 because *Knop* applies a solid metal hub, waveguide and sub reflector, an interior surface conductive coating as claimed, reference to which appears nowhere in *Knop* whatsoever, would have no purpose. As each and every element of the invention fails to appear in the cited reference, rejection of claims 3, 4, 11, 12, 15, 17, 20 and 26 under 35 U.S.C 102(e) is improper.

Finally, with respect to claim 28, *Knop* teaches, as referenced herein above, that the waveguide is metal. No discussion or indication in the figures exists that this waveguide has a dielectric outer surface – and or if it did, that the inner conductive coating required in that instance exists, either. As each and every element of the invention fails to appear in the cited reference, rejection of claim 28 under 35 U.S.C 102(e) is improper.

The Examiner rejected claims 5, 8, 13 and 21 under 35 U.S.C. 103(a) as unpatentable over *Knop* in view of *Kildal.* The Examiner applies *Knop* for each of the claim elements "except the soft boundary, the conical reflecting surface and the plurality of corrugations" and applies *Kildal* therefore. As described in detail herein above, *Knop*, in fact, fails to teach these elements. Therefore, as each and every element of the claimed invention fails to be disclosed, taught or suggested in the cited reference(s), rejection under 35 U.S.C. 103(a) is improper.

The Examiner rejected claims 6, 7, 18, 19, 23 and 24 under 35 U.S.C. 103(a) as unpatentable over *Knop* in view of *Sanford.* The Examiner applies *Knop* for each of the claim elements "except for the radial choke" and applies *Sanford* therefore. As described in detail herein above, *Knop*, in fact, fails to teach these elements. Therefore, as each and every element of the claimed invention fails to be disclosed, taught or suggested in the cited reference(s), rejection under 35 U.S.C. 103(a) is improper.

The Examiner rejected claim 14 under 35 U.S.C. 103(a) as unpatentable over *Knop* in view of *Kildal* and *Sanford.* The Examiner applies *Knop* and *Kildal* for each of the claim elements "except for the radial choke" and applies *Sanford* therefore. As described in detail herein above, *Knop*, in fact, fails to teach each and every element of parent claim 9 as described herein above.

Therefore, as each and every element of the claimed invention fails to be disclosed, taught or suggested in the cited reference(s), rejection under 35 U.S.C. 103(a) is improper.

Having obviated each of the Examiners rejections, applicant respectfully requests that a notice of allowance be issued. Should the Examiner be inclined to issue an Official Action other than the notice of allowance, Applicant respectfully requests that the Examiner first contact Applicant by telephone at the number listed below.

Respectfully submitted,

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/encl: replacement figures (3 sheets)

CERTIFICATE OF TRANSMISSION

I hereby certify that this correspondence is being facsimile transmitted to the U.S. Patent and Trademark Office (Fax No 703 872-9306) on March 7, 2005.

Andrew D. Babcock